

Portfolio Rebalancing Helping to Minimize Risk to Maximize Returns

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Many of us spend a great deal of time in the creation of our investment portfolios. We focus on the investment objectives, the time horizon, the individual constraints, and finally the specifics of each of the particular investments. Combining all of the above, we painstakingly create the perfect portfolio which effectively meets all pertinent criteria.

Then, like the Ronco Showtime Rotisserie Grill, we just set it and forget it. Right? Sadly for most of us, that is the case. Unfortunately, time doesn't think as much of our portfolios as we do. Over time, the perfect portfolio becomes less and less perfect as the various investment weightings within the portfolio shift, in some cases, dramatically.

The result of this asset weight shift is a change in the risk reward characteristics of the portfolio. In periods when equities post strong gains, the equity exposure in the portfolio grows, increasing the overall potential risk of the portfolio.

A stark example of this would be the years leading into the summer of 2000. In these years, equities, particularly growth flavoured equities outperformed quite strongly. The result to a portfolio which was not rebalanced was the equity portion of the portfolios was much higher than the risk profiles of the individuals would suggest as prudent. This is often not a concern in periods of rising markets.

The sad reality is that markets don't always go straight up. There are always corrections along the way and the this reality hit most investors very hard starting in the summer of 2000. There are a number of investors who still haven't recovered the losses they incurred during this period.

There are also investors who escaped the sharp declines. Those who escaped the market decline relatively well were the investors who had a well balanced portfolio and had exercised a disciplined portfolio management process. This disciplined portfolio management process is also known as rebalancing and is an often overlooked process.

In the simplest of terms, rebalancing brings your investment portfolio back into alignment with your original portfolio allocations. Another way to look at it is that you take some of your profits from your winning investments, and use them to purchase more of your underperforming investments.

Table 1 - Time Series Rebalancing

Rebalance Frequency	Ending Value	Annualized Return	Annualized Risk	Number of Transactions	Sharpe Ratio
Buy & Hold	\$ 24,346.89	9.84%	9.95%	0	0.59
Monthly	\$ 24,754.12	9.95%	9.24%	120	0.64
Quarterly	\$ 24,943.50	10.03%	9.22%	40	0.65
Semi-Annual	\$ 24,943.95	10.03%	9.15%	20	0.66
Annual	\$ 25,000.84	10.05%	9.12%	10	0.66

Essentially, rebalancing forces you to buy low and sell high.

Some will argue that it is best to let your winners run. That may be true in a bull market and if return is your only objective.

However, the recent market declines have placed

a renewed emphasis not only on portfolio return, but also on managing portfolio risk. Investors are more in tuned to the concept of investment risk than they have been at any time in the recent past.

Over the long term, rebalancing will not substantially boost your return. It may add a bit of incremental return, particularly as you rebalance within the equity portion of your portfolio, but the main purpose of portfolio rebalancing is to help to lower the portfolio volatility without negatively impacting the portfolio's expected return. The result is superior risk adjusted returns when compared to a buy and hold portfolio.

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Let's take a quick look at how rebalancing can improve your portfolio. A well constructed portfolio will be made up of stocks, bonds, and some cash. Bonds, have historically exhibited a low or negative correlation to equities. This means that as equities are moving higher, fixed income products are staying flat or declining slightly. On the flip side, as equities are declining, fixed income investments are often rising.

Table 2 - Range Band Rebalancing

Rebalance Frequency	Ending Value	Annualized Return	Annualized Risk	Number of Transactions	Sharpe Ratio
Buy & Hold	\$ 24,346.89	9.84%	9.95%	0	0.59
10% Band	\$ 24,983.53	10.05%	9.23%	16	0.66
20% Band	\$ 25,369.03	10.23%	9.28%	6	0.67
30% Band	\$ 25,811.82	10.40%	9.12%	4	0.70
40% Band	\$ 24,726.22	9.94%	9.27%	1	0.64
50% Band	\$ 25,149.29	10.13%	9.27%	1	0.66

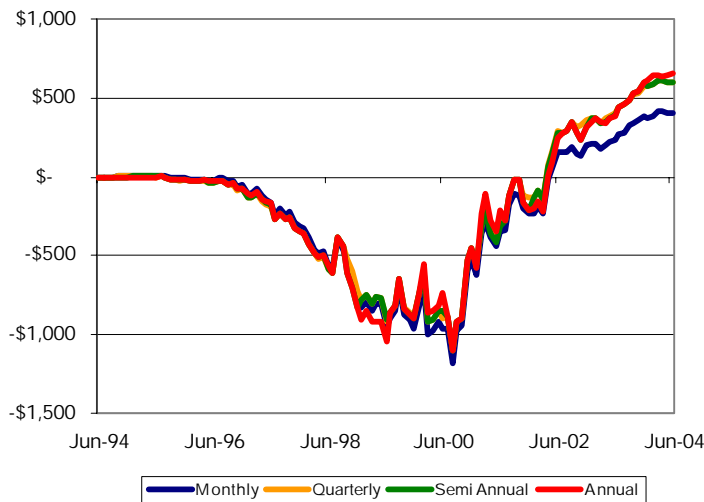
Knowing this helps to put the question of market timing to rest. For example, let's say that your initial equity allocation was 60%. Stocks. Assuming that stocks have had a great run and have increased to make up 70% of your portfolio. This obviously means that bonds have fallen to 30% of your portfolio.

When you rebalance, you take the profits from the equities and put them into the fixed income investments. Knowing that the markets tend to be cyclical, we know that at some point, the equities will decline and the fixed income investments will post positive returns. By taking some of the equities off the table, we are reducing the amount of the portfolio which is at risk by a decline in equities and adding to the fixed income portion, thereby increasing the amount of the portfolio that will benefit from a rise in fixed income.

We are selling equities high and buying fixed income low. In time, the equities will decline and the fixed income will rise and we repeat the process on a regular basis. At that point, we will take profits in fixed income and invest the proceeds into equity investments. Essentially, we are helping to minimize the downside of the portfolio and preparing the portfolio for the next market cycle.

The benefits of rebalancing are more pronounced the longer the investor's time horizon. Over the short term, rebalancing may actually negatively impact returns, both on an absolute and risk adjusted basis, particularly during a rising market. However, over the course of a traditional market cycle (4 to 7 years) rebalancing will positively impact overall risk adjusted portfolio performance.

Chart 1 - Relative Performance of Time Series Rebalancing



A rebalanced portfolio will exhibit less downside risk than a portfolio which has not been rebalanced.

The big question is how often do you need to rebalance? Some will suggest quarterly, semi annually or annually. Others will suggest some range around the target ranges. Under most circumstances, you shouldn't have to rebalance more than once a year.

In an example, we looked at a 10 year return on a portfolio which was made up of 5% Cash, 30% Bonds, 30% Canadian Equity, 25% US Equity, and 10% International Equity. A variety of scenarios including buy

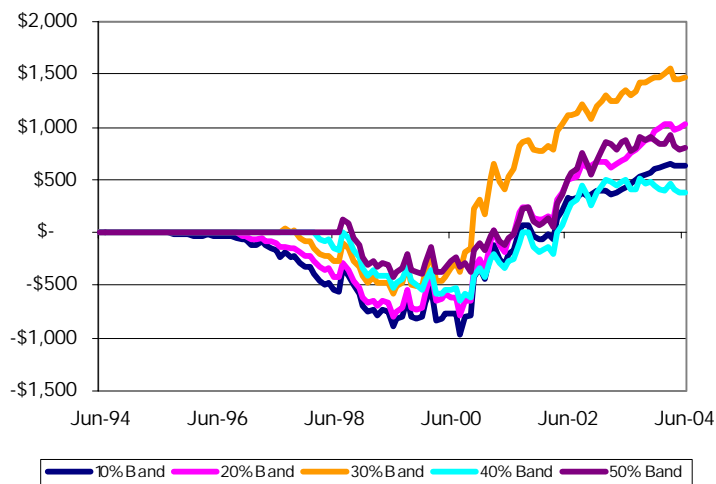
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and hold, calendar based rebalancing programs and rebalancing programs based on ranges around the target asset weights were studied.

As you can see from the tables, each of the rebalancing strategies resulted in portfolios which outperformed a buy and hold strategy on both an absolute and risk adjusted basis over the 10 year period.

The best results were achieved in the portfolios which allowed the portfolio to fluctuate between 20 and 30% from the original target weights. This is a bit of a compromise in that it allows the winners to run a bit, but then has the discipline to take profits at an acceptable point in time.

Chart 2 - Relative Performance of Range Band Rebalancing



The actual process of rebalancing is relatively simple to do using a basic Excel spreadsheet. You can set up a spreadsheet which compares the current market weights of each of the individual investments relative to the target weights which were established when the portfolio was initially set up or last revised. The sheet can then outline for you the exact sell and buy transactions which are necessary to bring the portfolio back into its optimal alignment.

In registered and other tax deferred accounts, this process is extremely straight forward as there are no tax consequences to consider. You simply place the necessary trades.

In non registered accounts, things become a bit trickier, since there may be potential tax issues to deal with. In these cases, it is wise to look at the after tax impact of any rebalancing transaction to try to gain an understanding of whether or not there will be sufficient benefit to warrant a rebalance.

Rebalancing in non registered accounts can also be achieved through such tactics as having any distributions redeployed to the under represented investments, or having new investment funds invested in the underrepresented investments.

In conclusion, portfolio rebalancing plays a very important role in managing overall portfolio risk. It is a disciplined approach and takes emotion out of the investment decision making process and helps the investor to buy low and sell high.

A properly implemented rebalancing program will help to reduce the downside risk of any investment portfolio without negatively impacting the return of the portfolio.

Tax consequences are not an issue with registered accounts.

In non registered accounts, tax consequences can be minimized by redeploying distributions and new money into the underrepresented investments first, thereby reducing or potentially eliminating any tax impact.